IN THE SPECIFICATION:

Please amend the following paragraphs as indicated.

[0004] Complexities arise in joining a PCB with electronic components when the vias become clogged with solder attributable to capillary action of the vias drawing in melted solder. Solder masks are commonly used to cover the vias, which are in turn coated with solder paste in order to maximize contact area between the electronic component and the PCB. During heating, air trapped within the vias expands and escapes, forcing its way through the solder mask and the overlying layer of melted solder. The escaping gas carries melted solder with it, which may splash on the PCB, resulting in shorts. A shorted PCB is defective and must be rejected thereby increasing the per-unit cost of non-defective PCBs.

[0018] If the entire component pad is covered with solder paste when the solder paste melts, the solder's surface tension will draw the melted solder into the vias and the component will have the tendency to rotate due to what is known as the Coriolis Effect. To prevent the solder paste from being ~~drawin~~ drawn into the via, the via is covered with a solder mask. However, if the via is covered with a solder mask when the board is heated, gas inside the via expands and tends to behave like a small geyser. This can create solder splashes on the printed circuit board. This solder splash may short electronic circuitry, thereby rendering the PCB assembly defective.

[0019] The joining material stencil (100; Fig. 1) is used to form joining material or solder patterns on component pads of the PCB assembly. The stencil (100) is placed on the PCB assembly and joining material, such as solder paste, is applied over the

stencil. The solder paste is smoothed and transfers though the joining material forming members (110). Once the solder paste has been smoothed, the stencil is removed, forming a solder pattern on the PCB assembly. The joining material or solder is used to couple an electronic component to the PCB assembly. The present solder patterns are shaped to provide an out gassing channel that allows expanding air trapped inside circuitry and under a solder mask to escape during an initial heating stage of a joining operation. The joining operation and out gassing channel will be described in more detail below.

[0021] Once the PCB assembly is provided (step 200), a joining material stencil (100; Fig. 1) is then placed on the component pad of the PCB assembly (step 210). The component pad may be a ground pad used in the production of a PCB. In addition, the joining material stencil (100; Fig. 1) includes a plurality of joining material forming members (110; Fig. 1), each member having a perimeter or outer boundary and inner boundaries. A layer of solder paste or other suitable joining material is then applied over the joining material stencil (step 220). Once applied, the joining material stencil (100; Fig. 1) allows the solder paste or other joining material to pass through the material forming members (110; Fig. 1) while preventing ~~such a~~ passage of the solder or other joining material where the voids in the pattern (140; Fig. 1) are to be located. The selective passage ~~lack~~ of solder paste or other joining material being transferred to the component pad of the PCB assembly forms a solder pattern with out-gassing channels defined between deposits of ~~the~~ solder or other joining material ~~patterns~~. Once the solder pattern is ~~formed~~ formed, the stencil is removed (step 230) from the PCB assembly.

[0025] In conclusion, the joining material stencil may be configured to facilitate deposition of a joining material, such as solder, around any number of electrical components or circuitry. In the illustrated example, the joining material stencil facilitates deposition of solder around a group of vias. Those of skill in the art will understand that the joining material stencil may be configured to separate melted joining material from any number of electrical circuitry components, to facilitate the escape of trapped gas in any number or electrical components, and/or prevent rotation of electrical components due to the Coriolis Effect. The preceding description has been presented only to illustrate and describe the present method and apparatus. It is not intended to be exhaustive or to limit the disclosure to any precise form disclosed. Many modifications and variations are possible in light of the above teaching. It is intended that the scope of the invention be defined by the following claims.